



Stilgebauer Award 2010 – Application Form

Please provide the information below. This application form needs to accompany the Project Summary for the project to be considered for a Stilgebauer award. Individuals or teams may complete the required information for their own project(s) or for another teacher or group's project

Project Name: <u>Spider Estimation</u>	
School Regional Area	<input type="checkbox"/> North Cook <input type="checkbox"/> South Cook <input checked="" type="checkbox"/> West 40
District Name	<u>LaGrange Highlands</u>
District No.	<u>106</u>
Name(s)-Teams with up to 5 members will be accepted! Include all names.	Email Address(s)
* <u>Cindy Novotny</u>	* <u>cnovotny @district106.net</u>
*	*
*	*
*	*
*	*
School Name	<u>Highlands Middle School</u>
School Street Address	<u>1850 Plainfield Rd</u>
School City, State, Zip	<u>LaGrange, IL 60525</u>
School Phone Number	<u>708 485-3074</u>
If you are providing information to nominate another teacher or group, please provide your information below (if different from those named above).	
Nominator's Name	<u>Janette Lanciloti</u>
Nominator's Phone #	<u>708 485 3450</u>
Best Contact Time	<u>8:30 - 10:30 am</u>
Nominator's Email	<u>jlanciloti @district106.net</u>

Please attach the Project Summary to this form and send to Learning Technology Center One Central at 2701 W. Washington Blvd., 2nd Floor, Bellwood, IL 60104

Larry Stilgebauer Technology Award 2010

Project Descriptive Title: Spider Estimation

Project Abstract: Students estimated the number of hands displayed on a spider on a bulletin board in the hallway. Then students calculated the mean, median, and mode for each class period. Using the data students created a Triple Bar Graph using the program Numbers.

Grade Level: 6th

Subject Area: Math

Technology Resources: Numbers

Other materials used: math textbook, calculators

Standards:

NETS S 3d: Students process data and report results.

NETS S 4c: Students collect and analyze data to identify solutions and /or make informed decisions

IL State goal 10.A.3a: Construct, read and interpret tables, graphs, and charts to organize and represent data

IL State goal 10.A.3b: Compare the mean, median, mode, and range, with and without the use of technology

Process:

Students had previous lessons using their textbook and calculator with the concepts of mean, median, and mode. Each math class in the 6th grade completed this technology integration project.

First, the math teacher put up a spider bulletin board using hands as the spider's body. The students were instructed to estimate the number of hands on the spider. Next, students were instructed on the use of Numbers Spreadsheet software. Students entered the estimations for each member of their class and were given the data from the other math classes. Their spreadsheet had 4 separate pages, one for mean, median, mode and the triple bar graph. Students were instructed on how to calculate each of the formulas for their class and then had to calculate the formulas for the other math classes. When they were finished, they discussed outliers, if the data made sense, and which class had the closest estimations. Then students had to copy and paste the mean, median and mode final results and create a triple bar graph. Students were given a rubric to assess themselves on the project. This project took about 3 days to complete.

Integration:

This project integrated technology at two levels of Bloom's taxonomy, creating and analyzing. Students enjoyed using Numbers spreadsheet to calculate the formulas like real mathematicians. They had learned how to compute the data with calculators but found using the spreadsheet to be much easier and it allowed them to spend more time analyzing the data. They

also found there were less input errors using the spreadsheet method than using the calculator method. Even though everyone had the same data, using the spreadsheet to graph allowed them to be creative with their graphs. Each one was different and allowed students to exhibit their own personal learning style. They were highly engaged in the process because it wasn't just using their class data but the entire 6th grade data.

Reflection:

This project helped students calculate mean, median, and mode with less time and more accuracy. They usually found it cumbersome and frustrating to calculate large amounts of data on their calculators or by hand. This project relieved them of that task and allowed them to focus on analyzing the data. This has allowed me to teach the students at a higher level. They can now compare their class's data to all other classes and draw conclusions about the data.

This project has also helped the students create a triple bar graph without the use of graph paper, rulers, and colored pencils. The task became more applicable to the real world. This project is a great way for students with poor fine motor skills to create an accurate and attractive bar graph. It also made it much easier for me to read and grade them.